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PATENT APPLICATION

ATTORNEY DOCKET NO. 10001388 -1

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Kurt E. Spears et al
Application No.: 09/558434
Filing Date: Apr 25, 2000

Confirmation No.: 8378
Examiner: Jerabek, Kelly L
Group Art Unit: 2612

Title: Photosensor Array Using Multiple Exposures To Reduce Thermal Noise

Mail Stop Appeal Brief - Patents
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF REPLY BRIEF

Transmitted herewith is the Reply Brief with respect to the Examiner's Answer mailed on 09/21/2005.

This Reply Brief is being filed pursuant to 37 CFR 1.193(b) within two months of the date of the Examiner's Answer.

(Note: Extensions of time are not allowed under 37 CFR 1.136(a))

(Note: Failure to file a Reply Brief will result in dismissal of the Appeal as to the claims made subject to an expressly stated new ground rejection.)

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IN THE
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Inventor(s): Kurt Spears *et al.*

Serial No.: 09/558,434

Examiner: Jerabek, Kelly L.

Filing Date: 04/25/2000

Group Art Unit: 2612

Title: Photosensor Array Using Multiple Exposures To Reduce Thermal Noise

COMMISSIONER FOR PATENTS
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REPLY BRIEF**Claim 1, Argument 1**

From MPEP 2111, during patent examination, the pending claims must be given their broadest interpretation consistent with the specification. Claim 1 specifies charges from an array of photosensors. In the Examiner's Answer on pages 7 and 8, the examiner is effectively interpreting claim 1 as if the charges can come from anywhere on a photosensor assembly, and in particular dark current from structures outside of the photosensors. That interpretation is inconsistent with the plain meaning of the words of the claim, and inconsistent with the specification.

Claim 1, Argument 2

Claim 1 has six steps, with a specific relationship among portions of charges in some of the steps. Specifically, the portion of the charges sent to the amplifier for the first exposure is dumped after the second exposure, and the portion of the charges dumped after the first exposure is sent to the amplifier after the second exposure. In the Examiner's

answer on pages 4 and 5, the examiner merely argues that it is known to shift some charges and to dump some charges, but the examiner provides no argument that the prior art teaches or suggests dumping a first portion after a first exposure and amplifying the first portion after a second exposure. In the Examiner's Answer, page 8, the examiner states what Pool may do (Pool can be operated in several different modes), and then characterizes what may happen in a first instance and a second instance. However, the examiner provides no argument that the prior art teaches or suggests the first instance followed by a second exposure followed by the second instance. Finally, in the Examiner's Answer on pages 10 and 11, the examiner stipulates the required location of the second exposure step, but reverses the order of shifting and dumping. The examiner is still arguing something that Pool may do, not what Pool or other prior art teaches or suggests. Pool describes alternative modes of operation. In one alternative, register 42 may be used for image pixels, and register 44 may be used for dark current, and as an alternative, register 42 may be used for dark current and register 44 may be used for image charge. However, Pool does not teach or suggest a method using one of the alternative modes, followed by a second exposure of the same image, followed by a second one of the alternative modes, as characterized by the examiner.

Claim 1, Augument 3

Claim 1 specifies two exposures. Pool does not teach or suggest multiple exposures. In the Examiner's Argument at pages 4-5, the examiner takes official notice that multiple exposures of the same image are known. Applicant agrees with the general statement that multiple exposures of the same image are known. However, Pool is a system in which that does not occur (pool deals with time-domain-integration which typically requires continuous exposure while the object being imaged is moving relative to the array), so it is improper to argue the obviousness of including that step along with other steps from Pool when Pool expressly teaches a system that does involve such a step.

Claim 4

Claim 4 specifies that there is no relative movement, between the array of photosensors and the image, between the steps of exposing. Pool expressly teaches a system in which the object being imaged is moving relative to the array. From Pool, column 2, lines 17-27, the reason for having alternative shift registers is to accommodate movement of an image in either of two opposite directions. In the Examiner's Answer, the examiner concludes, with no basis in the prior art, that it would be obvious to use the imaging sensor of Pool, using features of Pool intended for use with images moving in different directions, to capture images in which there is no relative movement. Applicant particularly traverses the last paragraph of page 5 of the Examiner's Answer, and the end of the first paragraph on page 9 of the Examiner's Answer, in which the examiner concludes that it would be obvious to modify Pool to image with no relative movement, when Pool expressly teaches away from that mode of operation.

In view of the above, applicant respectfully requests that the examiner's rejection of claims 1-5 be reversed.

Respectfully submitted,



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